

71. [Reiterated] The method according to claim 70, wherein the metastatic prostate cancer involves a bone marrow or a lymph node metastasis.

3 72. [Reiterated] A method according to claim 69, wherein the administering is carried out parenterally.

Sub E1 } 3 73. [Reiterated] A method according to claim 72, wherein the administering is carried out intravenously.

3 74. [Reiterated] A method according to claim 69, wherein the administering is carried out by intracavitary instillation.

3 75. [Reiterated] A method according to claim 69, wherein the administering is carried out rectally.

3 76. [Reiterated] A method according to claim 69, wherein the antibody or antigen binding portion thereof is administered following a prostatectomy.

D 1 77. [Amended] A method according to claim 69, wherein the antibody or antigen binding portion binds live cells.

78. [Reiterated] A method according to claim 69, wherein the antibody is selected from the group consisting of a monoclonal antibody and a polyclonal antibody.

Sub E1 } 79. [Reiterated] A method according to claim 78, wherein the antibody is selected from the group consisting of an E99, a J415, a J533, and a J591 monoclonal antibody.

80. [Reiterated] A method according to claim 78, wherein the antibody is a monoclonal antibody produced by a hybridoma having an ATCC Accession Number selected from the group consisting of HB-12101, HB-12109, HB-12127, and HB-12126.

81. [Cancel] A method according to claim 69, wherein the antibody or antigen binding portion thereof binds to an epitope of prostate specific membrane antigen which is also recognized by a monoclonal antibody selected from the group consisting of an E99, a J415, a J533, and a J591 monoclonal antibody.

82. [Cancel] A method according to claim 81, wherein the antibody or antigen binding portion thereof binds to an epitope of prostate specific membrane antigen which is also recognized by monoclonal antibody J591.

83. [Reiterated] A method according to claim 69, wherein the antibody or antigen binding portion thereof comprises an antigen binding portion of an amino acid sequence selected from the group consisting of SEQ ID NO:8 (variable heavy chain), SEQ ID NO:19 (variable light chain), an amino acid sequence of the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12126, and an amino acid sequence of the variable light chain produced by the hybridoma having ATCC deposit no. HB-12126.

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84. [Reiterated] A method according to claim 83, wherein the antibody or antigen binding portion thereof comprises an antigen binding portion of an amino acid sequence of SEQ ID NO:8 (variable heavy chain) or an amino acid sequence of the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12126 and an antigen binding portion of an amino acid sequence of SEQ ID NO:19 (variable light chain) or an amino acid sequence of the variable light chain produced by the hybridoma having ATCC deposit no. HB-12126.

85. [Reiterated] A method according to claim 83, wherein the antibody or antigen binding portion thereof comprises an antigen binding portion of an amino acid sequence selected from the group consisting of SEQ ID NO:8 (variable heavy chain) and SEQ ID NO:19 (variable light chain).

86. [Reiterated] A method according to claim 83, wherein the antibody or antigen

binding portion thereof comprises an antigen binding portion of an amino acid sequence from SEQ ID NO:8 (variable heavy chain) and an antigen binding portion of an amino acid sequence from SEQ ID NO:19 (variable light chain).

87. [Reiterated] A method according to claim 83, wherein the antibody or antigen binding portion thereof comprises an antigen binding portion of an amino acid sequence selected from the group consisting of an amino acid sequence of the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12126, and an amino acid sequence of the variable light chain produced by the hybridoma having ATCC deposit no. HB-12126.

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88. [Reiterated] A method according to claim 83, wherein the antibody or antigen binding portion thereof comprises an antigen binding portion of an amino acid sequence of the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12126 and an antigen binding portion of an amino acid sequence of the variable light chain produced by the hybridoma having ATCC deposit no. HB-12126.

89. [Reiterated] A method according to claim 69, wherein the antibody or antigen binding portion thereof comprises an antigen binding portion of an amino acid sequence encoded by a nucleic acid sequence selected from the group consisting of SEQ ID NO:6 (variable heavy chain), SEQ ID NO:17 (variable light chain), a nucleic acid sequence which encodes the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12126, and a nucleic acid sequence which encodes the variable light chain produced by the hybridoma having ATCC deposit no. HB-12126.

90. [Reiterated] A method according to claim 89, wherein the antibody or antigen binding portion thereof comprises an antigen binding portion encoded by a nucleic acid sequence of SEQ ID NO:6 (variable heavy chain) or a nucleic acid sequence which encodes the variable heavy chain of the hybridoma having ATCC deposit no. HB-12126 and an antigen binding portion encoded by a nucleic acid sequence of SEQ ID NO:17 (variable light chain) or a nucleic acid sequence which encodes the variable light chain produced by the hybridoma having ATCC

deposit no. HB-12126.

91. [Reiterated] A method according to claim 89, wherein the antibody or antigen binding portion thereof comprises an antigen binding portion of an amino acid sequence encoded by a nucleic acid sequence selected from the group consisting of SEQ ID NO:6 (variable heavy chain) and SEQ ID NO:17 (variable light chain).

92. [Reiterated] A method according to claim 89, wherein the antibody or antigen binding portion thereof comprises an antigen binding portion of an amino acid sequence encoded by a nucleic acid sequence from SEQ ID NO:6 (variable heavy chain) and an antigen binding portion of an amino acid sequence encoded by a nucleic acid sequence from SEQ ID NO:17.

93. [Reiterated] A method according to claim 89, wherein the antibody or antigen binding portion thereof comprises an antigen binding portion of an amino acid sequence encoded by a nucleic acid sequence selected from the group consisting of a nucleic acid sequence which encodes the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12126, and a nucleic acid sequence which encodes the variable light chain produced by the hybridoma having ATCC deposit no. HB-12126.

94. [Reiterated] A method according to claim 89, wherein the antibody or antigen binding portion thereof comprises an antigen binding portion of an amino acid sequence encoded by a nucleic acid which encodes the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12126 and an antigen binding portion of an amino acid sequence encoded by a nucleic acid which encodes the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12126.

95. [Cancel] A method according to claim 69, 81, 83, or 89, wherein the antibody is a monoclonal antibody.

96. [Cancel] A method according to claim 69, 81, 83, or 89, wherein the antibody or

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antigen binding portion thereof is internalized with the prostate specific membrane antigen.

97. [Cancel] A method according to claim 69, 81, 83, or 89, wherein the antibody or antigen binding portion thereof is selected from the group consisting of a Fab fragment, a F(ab')₂ fragment, and a Fv fragment.

98. [Cancel] A method according to claim 69, 81, 83, or 89, wherein the antibody or antigen binding portion thereof further comprises a cytotoxic drug.

99. [Cancel] A method according to claim 98, wherein the cytotoxic drug is selected from the group consisting of a therapeutic drug, a compound emitting radiation, molecules of plant, fungal, or bacterial origin, biological proteins, and mixtures thereof.

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100. [Cancel] A method according to claim 99, wherein the cytotoxic drug is a compound emitting radiation.

101. [Cancel] A method according to claim 100, wherein the compound emitting radiation is an alpha-emitter.

102. [Cancel] A method according to claim 101, wherein the alpha-emitter is selected from the group consisting of ²¹²Bi, ²¹³Bi, and ²¹¹At.

103. [Cancel] A method according to claim 100, wherein the compound emitting radiation is a beta-emitter.

104. [Cancel] A method according to claim 103, wherein the beta-emitter is ¹⁸⁶Re.

105. [Cancel] A method according to claim 103, wherein the beta-emitter is ⁹⁰Y.

106. [Cancel] A method according to claim 100, wherein the compound emitting

radiation is a gamma-emitter.

107. [Cancel] A method according to claim 106, wherein the gamma-emitter is ^{131}I .

108. [Cancel] A method according to claim 100, wherein the compound emitting radiation is a beta- and gamma-emitter.

109. [Cancel] A method according to claim 99, wherein the cytotoxic drug is a molecule of bacterial origin.

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110. [Cancel] A method according to claim 99, wherein the cytotoxic drug is a molecule of plant origin.

111. [Cancel] A method according to claim 99, wherein the cytotoxic drug is a biological protein.

112. [Cancel] A method according to claim 69, 81, 83, or 89, wherein the antibody or antigen binding portion thereof further comprises a label.

113. [Cancel] A method according to claim 112, wherein the label is selected from the group consisting of a biologically-active enzyme label, and a radiolabel.

114. [Cancel] A method according to claim 113, wherein the label is a radiolabel selected from the group consisting of ^{111}In , $^{99\text{m}}\text{Tc}$, ^{32}P , ^{125}I , and ^{188}Rh .

115. [Cancel] A method according to claim 69, 81, 83, or 89, wherein the antibody or antigen binding portion thereof is effective to initiate an endogenous host immune function.

116. [Cancel] A method according to claim 115, wherein the endogenous host immune function is complement-mediated cellular cytotoxicity.

117. [Cancel] A method according to claim 159, wherein the endogenous host immune function is antibody-dependent cellular cytotoxicity.

118. [Cancel] A method according to claim 69, 81, 83, or 89, wherein the antibody or antigen binding portion thereof is in a composition further comprising a pharmaceutically acceptable carrier, excipient, or stabilizer.

119. [Cancel] The method according to claim 69, 81, 83, or 89, wherein the antibody is administered in conjunction with a second therapeutic modality.

120. [Cancel] The method according to claim 119, wherein the second therapeutic modality is selected from the group consisting of surgery, radiation, chemotherapy, immunotherapy and hormone replacement.

121. [Cancel] The method according to claim 120, wherein the hormone replacement comprises treatment with estrogen or an anti-androgen agent.

122. [Cancel] The method according to claim 121, wherein the anti-androgen agent is an agent which blocks or inhibits the effects of testosterone.

3 — 123. [Reiterated] A method of treating, preventing, or delaying development or progression of prostate cancer comprising:

Sub E1 providing an antibody or antigen binding portion thereof which binds to an extracellular domain of prostate specific membrane antigen, wherein the antibody is an IgG; and
administering the antibody or antigen binding portion thereof to a subject in need of treatment under conditions effective to treat, prevent, or delay the development or progression of prostate cancer.

124. [Reiterated] A method of treating, preventing, or delaying development or

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progression of prostate cancer comprising:

providing an antibody or antigen binding portion thereof which binds to an extracellular domain of prostate specific membrane antigen, wherein the antibody is labeled with the radiolabel ⁹⁰Y; and

administering the antibody or antigen binding portion thereof to a subject in need of treatment under conditions effective to treat, prevent, or delay the development or progression of prostate cancer.

Sub B1 3 125. [Reiterated] A method of treating, preventing, or delaying development or progression of prostate cancer comprising:

providing an antibody or antigen binding portion thereof which binds to an extracellular domain of prostate specific membrane antigen, wherein the antibody is labeled with a radiolabel, and wherein the radiolabel is a beta- or gamma-emitter; and

administering the antibody or antigen binding portion thereof to a subject in need of treatment under conditions effective to treat, prevent, or delay the development or progression of prostate cancer.

126. [Amended] A method of treating, preventing, or delaying development or progression of prostate cancer comprising:

D2 providing an antibody or antigen binding portion thereof which binds to an extracellular domain of prostate specific membrane antigen, wherein the antibody is bound to a cytotoxic drug of bacterial origin; and ~~antibody~~

administering the antibody or antigen binding portion thereof to a subject in need of treatment under conditions effective to treat, prevent, or delay the development or progression of prostate cancer. --

Please add claims 127-163.

D3 127. [New] A method of treating, preventing, or delaying development or progression of prostate cancer comprising:

providing an antibody or antigen binding portion thereof which binds to an extracellular domain of prostate specific membrane antigen, wherein the antibody is bound to a cytotoxic drug of plant origin; and *ricin*

administering the antibody or antigen binding portion thereof to a subject in need of treatment under conditions effective to treat, prevent, or delay the development or progression of prostate cancer.

128. [New] A method of treating, preventing, or delaying development or progression of prostate cancer, comprising:

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providing an antibody or antigen binding portion thereof which competes for binding to prostate specific membrane antigen with a monoclonal antibody selected from the group consisting of J591, J415, J533, and E99;

administering the antibody or antigen binding portion thereof to a subject in need of treatment under conditions effective to treat, prevent, or delay the development or progression of prostate cancer.

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129. [New] A method according to claim 128, wherein the antibody or antigen binding portion thereof competes for binding to prostate specific membrane antigen with monoclonal antibody J591.

130. [New] A method according to claim 128, wherein the antibody or antigen binding portion thereof competes for binding to prostate specific membrane antigen with monoclonal antibody J415.

131. [New] A method according to claim 128, wherein the antibody or antigen binding portion thereof binds to live cells.

132. [New] A method according to claim 69, wherein the antibody or antigen binding portion thereof comprises an antigen binding portion of an amino acid sequence selected from the group consisting of an amino acid sequence of the variable heavy chain produced by the

hybridoma having ATCC deposit no. HB-12109, and an amino acid sequence of the variable light chain produced by the hybridoma having ATCC deposit no. HB-12109.

133. [New] A method according to claim 69, wherein the antibody or antigen binding portion thereof comprises an antigen binding portion of an amino acid sequence of the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12109, and an amino acid sequence of the variable light chain produced by the hybridoma having ATCC deposit no. HB-12109.

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134. [New] A method according to claim 69, wherein the antibody or antigen binding portion thereof comprises an antigen binding portion of an amino acid sequence encoded by a nucleic acid sequence selected from the group consisting of a nucleic acid sequence which encodes the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12109, and a nucleic acid sequence which encodes the variable light chain produced by the hybridoma having ATCC deposit no. HB-12109.

135. [New] A method according to claim 69, wherein the antibody or antigen binding portion thereof comprises an antigen binding portion of an amino acid sequence encoded by a nucleic acid which encodes the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12109 and an antigen binding portion of an amino acid sequence encoded by a nucleic acid which encodes the variable heavy chain produced by the hybridoma having ATCC deposit no. HB-12109.

136. [New] A method according to claim 69, 83, 89, or 127, wherein the antibody is a monoclonal antibody.

137. [New] A method according to claim 69, 83, 89, 127, or 128, wherein the antibody or antigen binding portion thereof is internalized with the prostate specific membrane antigen.

3- 138. [New] A method according to claim 69, 83, 89, 127, or 128, wherein the antibody

or antigen binding portion thereof is selected from the group consisting of a Fab fragment, a F(ab')₂ fragment, and a Fv fragment.

139. [New] A method according to claim 69, 83, 89, 127, or 128, wherein the antibody or antigen binding portion thereof further comprises a cytotoxic drug.

140. [New] A method according to claim 69, 83, 89, or 128, wherein the cytotoxic drug is selected from the group consisting of a therapeutic drug, a compound emitting radiation, molecules of plant, fungal, or bacterial origin, biological proteins, and mixtures thereof.

141. [New] A method according to claim 140, wherein the cytotoxic drug is a compound emitting radiation.

142. [New] A method according to claim 141, wherein the compound emitting radiation is an alpha-emitter.

143. [New] A method according to claim 142, wherein the alpha-emitter is selected from the group consisting of ²¹²Bi, ²¹³Bi, and ²¹¹At.

144. [New] A method according to claim 141, wherein the compound emitting radiation is a beta-emitter.

145. [New] A method according to claim 144, wherein the beta-emitter is ¹⁸⁶Re.

146. [New] A method according to claim 144, wherein the beta-emitter is ⁹⁰Y.

147. [New] A method according to claim 141, wherein the compound emitting radiation is a gamma-emitter.

148. [New] A method according to claim 147, wherein the gamma-emitter is ¹³¹I.

149. [New] A method according to claim 141, wherein the compound emitting radiation is a beta- and gamma-emitter.

150. [New] A method according to claim 140, wherein the cytotoxic drug is a molecule of bacterial origin.

151. [New] A method according to claim 140, wherein the cytotoxic drug is a molecule of plant origin.

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152. [New] A method according to claim 140, wherein the cytotoxic drug is a biological protein.

153. [New] A method according to claim 69, 83, 89, or 128, wherein the antibody or antigen binding portion thereof further comprises a label.

154. [New] A method according to claim 153, wherein the label is selected from the group consisting of a biologically-active enzyme label, and a radiolabel.

155. [New] A method according to claim 154, wherein the label is a radiolabel selected from the group consisting of ^{111}In , $^{99\text{m}}\text{Tc}$, ^{32}P , ^{125}I , ^{131}I , ^{14}C , ^3H and ^{188}Rh .

156. [New] A method according to claim 69, 83, 89, 127 or 128, wherein the antibody or antigen binding portion thereof is effective to initiate an endogenous host immune function.

157. [New] A method according to claim 156, wherein the endogenous host immune function is complement-mediated cellular cytotoxicity.

158. [New] A method according to claim 156, wherein the endogenous host immune function is antibody-dependent cellular cytotoxicity.

159. [New] A method according to claim 69, 83, 89, 127 or 128, wherein the antibody or antigen binding portion thereof is in a composition further comprising a pharmaceutically acceptable carrier, excipient, or stabilizer.

160. [New] The method according to claim 69, 83, 89, 127 or 128 wherein the antibody or antigen binding portion thereof is administered in conjunction with a second therapeutic modality.

161. [New] The method according to claim 160, wherein the second therapeutic modality is selected from the group consisting of surgery, radiation, chemotherapy, immunotherapy and hormone replacement.

162. [New] The method according to claim 161, wherein the hormone replacement comprises treatment with estrogen or an anti-androgen agent.

163. [New] The method according to claim 162, wherein the anti-androgen agent is an agent which blocks or inhibits the effects of testosterone.

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